

DEDOV, V.B.; VOLKOV, V.V.; GVOZDEV, B.A.; YERMAKOV, V.A.; LEBEDEV, I.A.;
RAZBITNOY, V.M.; TRUKHLYAYEV, P.S.; CHUBURKOV, Yu.T.; YAKOVLEV, G.N.

Production of Pu^{242} and Cm^{242} from neutron irradiated
 Am^{241} . Radiokhimia 7 no.4:453-461 '65. (MIRA 18:8)

KHAYKIN, Viktor Abramovich; YAKOVLEV, G.N., red.

[Safety manual for a sling operator] Pamiatka stropal'-
shchika po tekhnike bezopasnosti. Moskva, Transport,
1965. 46 p.
(MIRA 18:8)

MIROSHNIKOV, Leonid Vladimirovich, kand. tekhn. nauk; KRAMARENKO,
G.V., prof., doktor tekhn. nauk, red.; YAKOVLEV, G.N., red.

[Technical operation of automobiles; practical laboratory
work] Tekhnicheskaiia ekspluatatsiia avtomobilei; labora-
tornyi praktikum. Moskva, Transport, 1965. 192 p.
(MIRA 18:7)

SABININ, Andrey Aleksandrovich; PLEKHANOV, Ivan Petrovich;
CHERNYAYKIN, Vladimir Aleksandrovich; YAKOVLEV, G.N.,
red.

[Manual for the driver of the second class] Uchebnik sho-
fera vtorogo klassa. Moskva, Transport, 1965. 393 p.
(MIRA 18:9)

YAKOVLEV, G.P.; YATSENKO-KHMELEVSKIY, A.A.

Basic trees of the Duekoue region (Republic of Guinea) and the
characteristics of their wood. Rast. res. 1 no.2:206-218 '65.
(MIRA 18:11)

1. Leningradskaya ordena Lenina lesotekhnicheskaya akademiya
imeni Kirova i Leningradskiy khimiko-farmatsevticheskiy institut.

YAKOVLEV, G.P., BORISOVA, N.B.

ΔE - and ΔG - effects in strong magnetic fields. Fiz. met. i metalloved.
16 no.6:943-944 D '63. (MIRA 17:2)

1. Ural'skiy gosudarstvenny universitet imeni A.M.Gor'kogo.

YAKOVLEV, G.P.

Crystals in the epidermis of the genus Sophora L. Apt. delo 10
no. 5:26-28 S-O '61. (MIRA 14:12)

1. Leningradskiy khimiko-farmatsevticheskiy institut.
(SOPHORA)

YAKOVLEV, G.P.

Anatomy of vegetative organs in Central Asian species of the
genus Lagochilus Bge. Trudy Len. khim.-farm. inst. 12:123-131
'61. (MIRA 15:3)

1. Kafedra farmakognozii i botaniki Leningradskogo khimiko-
farmatsevticheskogo instituta.
(SOVIET CENTRAL ASIA--LAGOCHILUS)
(BOTANY--ANATOMY)

YAKOVLEV, G.P.

Taxonomy of the genus Niedzwedzkia B. Fedtsch. and the tribe
Incarvilleae (Endl.) Yakovl. of the family Bignoniaceae Pers.
Bot. mat. Gerb. 21:328-337 '61. (MIRA 14:10)
(Bignoniaceae)

YAKOVLEV, G.P.

ZATONSKIY, A.S.; TARNOPOL'SKIY, G.M.; LARIONENKO, N.A.; OSTROUMOV, A.V.;
ZAKHAR'YANTS, V.N.; YAKOVLEV, G.P.; LOBANOV, T.F.; KUZMETSOV, P.T.;
MERKULOV, A.I.

Maximum satisfaction of the needs of the population is the most important duty of communication workers. Vest.sviazi 14 no.2:23-25 F '54.
(MLRA 7:5)

1. Nachal'nik otdela pochtovoy svyazi (for Zatonskiy). 2. Nachal'nik
otdela vnutrirayonnoy svyazi (for Tarnopol'skiy). 3. Zamestitel' nachal'-
nika telefonno-telegrafnogo otdela (Larionenko). 4. Nachal'nik telegrafa
(for Ostroumov). 5. Nachal'nik pochtamta (for Zakhar'yants). 6. Nachal'-
nik mezhdugoreodnoy telefonnoy stantsii (for Yakovlev). 7. Glavnyy inzhener
oblastnogo upravleniya svyazi (for Lobanov). 8. Zamestitel' nachal'nika
oblastnogo upravleniya svyazi (Kuznetsov). 9. Nachal'nik oblastnogo uprav-
leniya svyazi (for Merkulov).
(Telecommunication)

S/048/62/026/002/023/032
B117/B138

AUTHORS: Dunayev, F. N., and Yakovlev, G. P.

TITLE: Damping capacity in an ordering iron-nickel alloy

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,
v. 26, no. 2, 1962, 284-287

TEXT: This paper was presented at a conference on magnetism and antiferromagnetism. The authors examined experimentally the theoretical conclusion that the ferromagnetic contribution to damping capacity is bound to be sensitive to ordering processes even in alloys with component atoms of similar size. The Fe-Ni-specimens were 300 mm-long wires, 0.6 mm diam., of 66-permalloy (60 % Ni). The measurements were made in vacuo on a torsion oscillation machine with ~ 1 cps, at various temperatures and degrees of magnetization. The specimens were vacuum annealed for 2 hr at 1000°C and then cooled to 600°C at the rate of 200°/hr. Subsequent heat treatment (quenching or 16-hr annealing at 450°C) was used to induce the anordered or disordered state. It was found that a magnetic field of 50-100 oe will exclude damping capacity due to the ferromagnetism of the ✓

Card 1/2

Damping capacity in an ordering...

S/048/62/026/002/023/032
B117/B138

material. In the range studied the non-ferromagnetic part of damping capacity is independent of the vibration amplitude. At 100 oe this component is only slightly sensitive to the ordering process as compared with the losses caused by ferromagnetism. With this method therefore valuable information can be obtained, both regarding ordering, connected with it, in ferromagnetic alloys with component atoms of similar size. Another interesting characteristic is the vibration period, which is also sensitive to ordering and is related to the shear modulus. G. Vert is mentioned. There are 5 figures and 4 references; 3 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Bozorth, R. Ferromagnetism, IL., M., 1956 (Translation of Ferromagnetism).

ASSOCIATION: Ural'skiy gos. universitet im. A. M. Gor'kogo (Ural State University imeni A. M. Gor'kiy)

Card 2/2

L 14361-65 EXP(1) EXP(2) EXP(t)/EXP(b) Pad SSD/AFWL/ASD(f)-2/
1963 2. 1963 2. 1963 2. 1963 2. 1963 2.

SOURCE: Ref. zh. Metallurgiya, Abs. 7I217

B

AUTHOR: Dunayev, F. N.; Yakovlev, G. P.; Borisova, N. B.

TITLE: Internal friction hysteresis in nickel

CITED SOURCE: Sb. Relaksats. yavleniya v met. i splavakh. M.,
Metallurgizdat, 1963, 203-213

TOPIC TAGS: internal friction, hysteresis, hysteresis loop, nickel,
oscillation, shear modulus, stress, annealing, magnetic field

TRANSLATION: Internal friction hysteresis, the period of
mechanical oscillation T, and the shear modulus arising with a
cyclical change in the amplitude of stress have been investigated in
pure electrically nickel type [sic] as a function of preliminary
annealing temperature. Measurements were made on a torsion
pendulum type instrument provided with electronic means for recording
T and the logarithmic decrement, in samples with a diameter of 0.52
mm and a length of 300 mm, at a frequency of approximately 1.5 hertz,

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L 14361-65

ACCESSION NR: AR4045877

in the absence of a magnetic field, and in a magnetic field with a strength up to 1400 cerssteds. The magnetic hysteresis loops were measured with an astatic magnetometer. The samples were previously annealed under vacuum at temperatures from 200 to 1000° for one hour; after each annealing internal friction and T were measured as a function of the amplitude of the oscillations and the applied magnetic field. If the sample is previously demagnetized by an alternating current and a direct magnetic field is intensified starting from a magnitude of zero, in weak magnetic fields the internal friction and T remain approximately constant and then start to increase with an increase in the magnetic field and attain a maximum. The increase in internal friction and T is hypothetically connected with a decrease in impediments to the displacement of boundaries and energy barriers which hinder the rotation of the vectors of spontaneous magnetization. With a further increase in the magnetic field in the opposite direction, the magnitudes of internal friction and T, starting with a maximum field, have somewhat greater values than on the magnetization curve, but at zero magnetic field there exist certain residual values of internal friction and T compared to the demagnetized state. With an increase in the magnetic

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L 14361-65
ACCESSION NR: AR4045877

field from a zero value along the rising branch of the magnetic hysteresis loop, the values of internal friction and T at first fall sharply, forming a marked minimum in the magnetic field as somewhat smaller fields H_c . With a further increase in the field, internal friction and T rise sharply and, starting at a maximum magnetic field, coincide with the values on the magnetization curve. As a result, "butterfly shaped" hysteresis loops for internal friction and T are obtained which are characteristic for sharp effects. The form of the loop depends on the heat treatment of the sample. 11 literature titles.

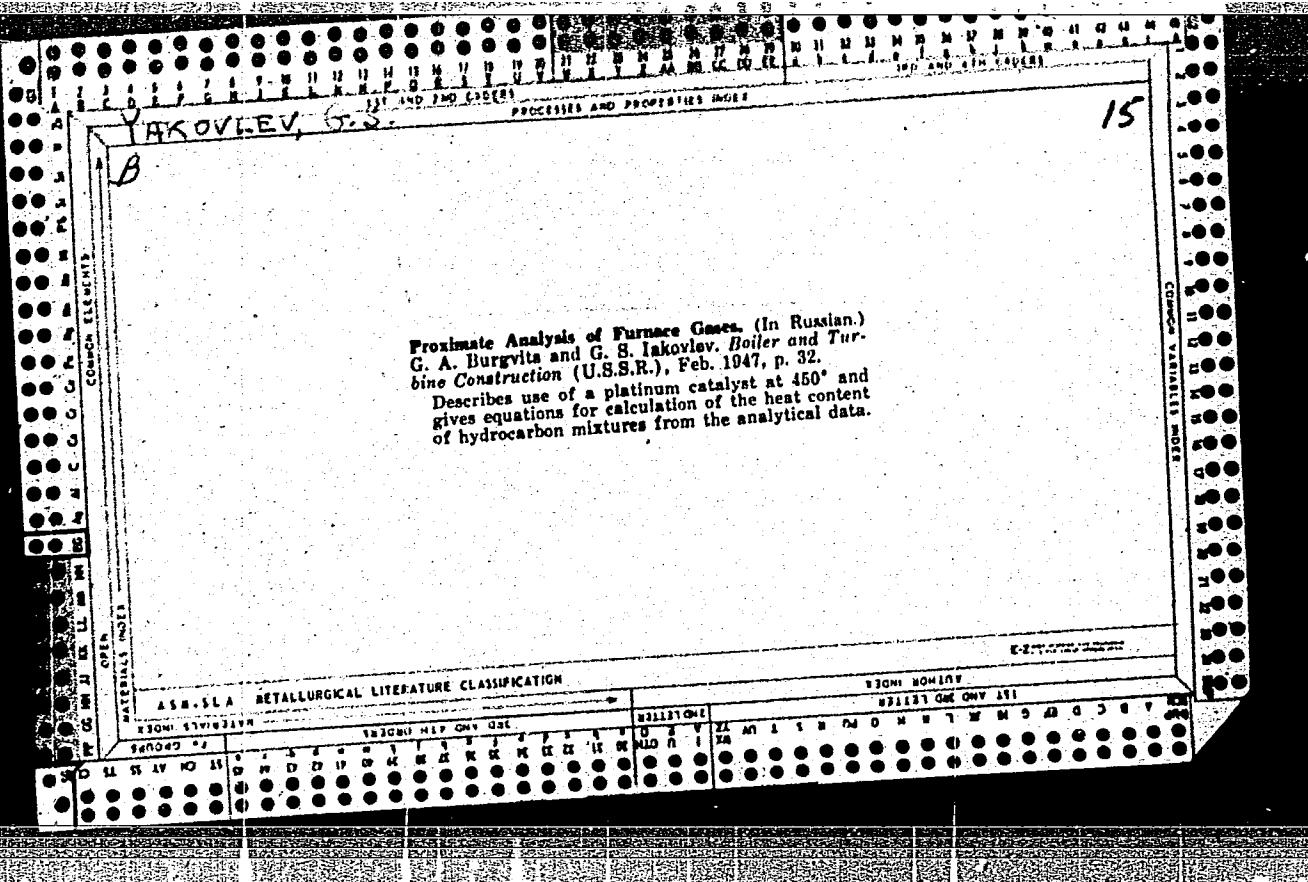
SUB CODE: MM ENCL: 00

Card 3/3

YAKOVLEV, G.F.

New system of the genus *Sophora* L. and its phylogeny. Trudy Len. Khim.-farm. inst. no.17:50-77 '64.
(MIRA 18:1)

Some structural characteristics of the leaf epidermis of *Sophora*,
Section Keyserlingia (Bge) Yakove. Ibid.:167-169



1. YAKOVLEV, G. S.
2. USSR (600)
4. Lumbering
7. Over-all mechanization in the Novaya Lyalya lumber camp. Les. prom. 12 no. 10, '52.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

KOLESNIKOV, B.P.; SHALYGIN, B.N.; YAKOVLEV, G.S.

Technological aspects of logging operations and their sivicultural significance at the Skorodumsk Logging Camp of the "Sverdles" Combine.
Trudy Inst. biol. UFAN SSSR no.16:127-136 '60. (MIRA 13:10)

1. Institut biologii Ural'skogo filiala AN SSSR i Skorodumskiy
lespromkhoz kombinata "Sverdles".
(Sverdlovsk Province--Lumbering)

YAKOVLEV, Georgiy Semenovich; FRIDMAN, G.B., otvetstvennyy redaktor; TSVETKOV, N.V., redaktor; KOMOLOVA, V.M., tekhnicheskiy redaktor

[Electric power systems for ships] Sudovye elektroenergeticheskie sistemy. Leningrad, Gos.sciuznoe izd-vo sudostroit. promyshl., 1957. 303 p. (MIRA 10:11)
(Electricity on ships)

NECHAYEV, Vyacheslav Vasil'yevich; YAKOVLEV, G.S.; retsenzent; CHICHKIN,
V.M., retsenzent; FRIK, A.O., inzh., red.; SHLENNIKOVA, Z.B.,
red., inz.-va; POKHLEBKINA, M.I., tekhn.red.

[Electric equipment of ships used in inland-water transportation]
Elektricheskoe oborudovanie sudov vnutrennego plavaniia. Moskva,
Izd-vo "Rechnoi transport," 1960. 341 p. (MIRA 14:4)

1. Nachal'nik otdela elektroradicoborudovaniya i avtomatiki
TSentral'nogo tekhniko-konstruktorskogo byuro (for Yakovlev).
(Inland water transportation)
(Ships--Electric equipment)

YAKOVLEV, Georgiy Semenovich; TRAPER, Ye.I., inzh., retsenzent; CHEKUNOV, K.A., inzh., retsenzent; BOYTSOV, A.Ye., nauchnyy red.; CHICHKANOVA, V.S., red.; ERASTOVA, N.V., tekhn. red.

[Marine electric power systems] Sudovye elektroenergeticheskie sistemy. Leningrad, Gos.soiuznoe izd-vo sudostroit.promyshl., 1961. 351 p.
(MIRA 14:12)

(Electricity on ships)

MIKHAYLOV, Vitaliy Stepanovich; ROSIN, Yevgeniy Iosifovich;
YAKOVLEV, G.S., ~~fizich. retseptent~~; KHOMYAKOV, N.M.,
doktor tekhn. nauk, nauchnyy red.; SACHUK, N.A., red.;
SHISHKOVA, L.M.; tekhn. red.

[Electromechanical amplifiers of the longitudinal field on
ships] Elektromashinnye usiliteli prodol'nogo polia na sudakh.
Leningrad, Sudpromgiz, 1963. 181 p. (MIRA 16:5)
(Electricity on ships)

YAKOVLEV, G., kand. tekhn. nauk

Modern requirements of the electrical equipment of river boats.
Rech. transp. 23 no.10:30-32 0 '64.

(MIRA 17:12)

BOYTSOV, Aleksandr Yevgen'yevich [deceased]; YAKOVIEV, G.S., kand.
tekhn. nauk; REBO, N.Yu., retsentzent; AL'TSHULER, G.A.,
retsentzent; LEYKINA, T.L., red.

[Electric equipment on ships] Sudovaia elektricheskaiia ap-
paratura. Leningrad, Sudostroenie, 1964. 223 p.
(MIRA 17:11)

PANOV, Vladislav Aleksandrovich; YAKOVLEV, G.S., retsenzent;
KHOMYAKOV, N.M., nauchn. red.; ROZENGAUZ, N.M., red.

[Marine electric power plants and the calculation of
their capacity] Sudovye elektrostantsii i raschet ikh
moshchnosti. Leningrad, Sudostroenie, 1965. 129 p.
(MIRA 18:4)

ISAKOV, P.P.; SKARYTIN, L.I.; SHCHERBAKOV, V.A.; MAKARENKO, V.I.;
BOL'SHUKHIN, V.S.; PIVNIK, M.M.; CHUDAKOV, V.D.; YAKOVLEV,
G.S.;

[DET-250 diesel-electric tractor; its construction and opera-
tion] Dizel'-elektricheskii traktor DET-250; ustroistvo i
eksploatatsiia. Moskva, Mashinostroenie, 1965. 479 p.
(MIRA 18:7)

YAKOVLEV, G.Ya.

Tissue incompatibility in homotransplantation and ways to surmount it. Vest. khir. 93 no.9:123-133 S '64. (MIRA 18:4)

1. Iz laboratorii konservirovaniya i peresadki tkaney i organov (zav. - prof. N.G.Kartashevskiy) Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelivaniya krovi.

FILATOV, A.N.; YAKOVLEV, G.Ya.

Experimental transplantation of an intact spleen for the purpose
of overcoming tissue incompatibility. Pat. fiziol. i eksp. terap.
9 no.1:34-40 Ja-F '65. (MIRA 18:11)

1. Leningradskiy nauchno-issledovatel'skiy institut perelivaniya
krovi (direktor A.D. Belyakov; nauchnyy rukovoditel' instituta-
chlen-korrespondent AMN SSSR prof. A.N. Filatov).

L 34036-66 - EWT(1)

ACC NR: AR6017195

SOURCE CODE: UR/0058/65/000/012/A032/A032

AUTHOR: Yakovlev, G. V.

35

TITLE: Time selector with three additional modes based on the AI-100-1 analyzer B

SOURCE: Ref. zh. Fizika, Abs. 12A312

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 2. M., Atomizdat, 1965, 34-41

TOPIC TAGS: time interval counter, pulse analyzer, time delay, pulse counting/ AI-100-1 pulse analyzer

ABSTRACT: A description is presented of a time selector, constructed on the basis of the recording device of the AI-100-1 analyzer. The selector ensures the following four operating modes: 1) principal mode of one-dimensional time selector with channel width from ~100 μ sec to several seconds and with resolution time for delayed signals ~1 μ sec; b) two-dimensional time selector mode with the same values as in the first case for the channel widths and for the resolution time; c) number-analyzer mode, in which one investigates the distribution of the number of pulses passing into the input of the analyzer during a specified reference interval, the magnitude of which can be fit from several tens of microseconds to several seconds for the given problem; d) time-analyzer mode with channel widths from 1 μ sec to several seconds. To provide all the foregoing modes it is necessary to modify slightly the circuits of the registering device. All these changes involve no direct interference with the circuits that shape the current pulses controlling the ferrite matrix. L. S. [Translation of abstract]

SUB CODE: 20, 09
Card 1/1

YAKOVLEV, G.V.

Characteristics of the phasic development of wild rye varieties.
Agrobiologiya no.5,762-764 S.O '65. (MIR 1879)

1. Maykopakaya optynaya stantsiya Vsesoyuznogo instituta
rasteniyevodstva.

YAKOVLEV, G.V.

Applying the team method in the bark slabbing and marking operations. Gidroliz. i lesokhim. prom. 18 no.5:28-29 '65.
(MIRA 18:7)

1. Volgo-Vyatskiy sovet narodnogo khozyaystva.

YAKOVLEV, G.V.

Seminar on turpentining. Gidroliz. i lesokhim.prom. 18 no.4:31-32
'65. (MIRA 18:6)

BELYAYEV, L.I.; GEDIONOV, L.I.; GRITCHENKO, Z.G.; MAKSIMOVA, A.M.;
SHVEDOV, V.P.; YAKOVLEVA, G.V.

Radioactive fallout in the Crimea in 1960-1961 Atom. energ. 15
no. 3:264-265 S '63. (MIRA 16:10)

(Crimea--Radioactive fallout)

YAKOVLEV, G.V., starshiy leytenant, voyennyy shturman v torogo klassa

Determining the angle of drift from unit readings. Vest.Vozd.
Fl. no.12:75-76 D '60. (MIRA 14:5)
(Navigation(Aeronautics))

ACCESSION NR: AP4012258

S/0089/64/016/001/0003/0008

AUTHORS: Mostovaya, T. A.; Mostovoy, V. I.; Yakovlev, G. V.

TITLE: The probability of monochromatic neutron triple fission of U-235 in the energy region of 0.06-10 Ev.

SOURCE: Atomnaya energiya, v. 16, no. 1, 1964, 3-8

TOPIC TAGS: triple fission, heavy fragments, long-range particle, fission probability, double fission, argon, carbon dioxide, electron pulses, time analyzer, ionizing chamber, a-particles

ABSTRACT: A number of experiments have been made in recent years in the so-called triple nuclear fission, that is the fission into two heavy fragments and a long-range a-particle. An investigation into the triple fission is the slow neutron resonance region could produce additional information essential to an understanding of the triple fission process. The relationship between the triple fission probability of U-235 and the neutron energy was measured by the flight-time method in a linear electron accelerator at the Kurchatov institute of atomic energy. A device consisting of seven ionization

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ACCESSION NR: AP4012258

chambers was used to record the triple and double fission. It appears that the permissible levels in the double fission (0.282; 1.138; 3.6 and 8.8 ev) are manifested also in the triple fission. But the data produced by the measurements of the probable U-235 triple fission are contradictory. One of the reasons for that is that the longer the lifetime of the compound nucleus, the greater the probability of triple fission.

"In conclusion, we consider it our pleasant duty to thank M. I. Pevzner for offering the use of a linear accelerator to make the measurements, and for his useful discussion of the work. We are also thankful to A. S. Kolsanov and the group of accelerator operators for their assistance in the work."

Orig. art. has: 4 Figures, 1 Formula and 1 Table.

ASSOCIATION: Institut atomnoy energii im. I. V. Kurchatova (The I. V. Kurchatov institute of atomic energy)

SUBMITTED: 26May63

DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: PH

NR REF SOV: 005 OTHER: 012

Card 2/2

MUKHIN, L.M. (Moskva); YAKOVLEV, G.V. (Moskva)

Use of the method of two reflected pulses in measuring the elastic constants of solids at elevated temperatures. Akust.zhur. 10 no.4: 483-485 '64. (MIRA 18:2)

Iakovlev, G. IA., jt. au.

The organization of uniform work in a machine shop Moskva, Gos. nauch.-tekn. izd-vo mashinostroit. lit-ry, 1945 12y p. (4y-29542)

TJ1155.847

1. Factory management. 2. Machinery - Trade and manufacture - Leningrad
I. Iakovlev, G. IA., jt. au.

I. 35368-66 EWT(d)/EWF(1) IJP(c) BB/GG

ACC NR: AR6017795

. SOURCE CODE: UR/0058/66/000/001/A046/A046

43
BAUTHOR: Yakovlev, G. V.; Ivanov, V. I.TITLE: Slow flip flop of increased reliability with counter input, and multivibrator using current gates 16c

SOURCE: Ref. zh. Fizika, Abs. 1A412

REF SOURCE: Tr. 6oy Nauchno-tekhn. konferentsii po yadern. radioelektron. T. 1. M., Atomizdat, 1964, 107-114

TOPIC TAGS: flip flop circuit, multivibrator, gate circuit, transistorized circuit/
P16 transistor transistor,

ABSTRACT: The use of transistors with different types of conductivity makes it possible to construct a flip flop which has no vacuum tube analog, in which both transistors are simultaneously in cutoff or conducting state. Such circuits are not critical to the scatter of the transistor parameters and element parameters, and to changes in the supply voltage, and make it possible to use transistors with small gain and to operate stably in the temperature range -20 - +70C. The flip flops can be readily connected in cascade, and a variant of a circuit without transistors is also possible. Shortcomings of such flip flops are the low speed (maximum frequency 1 - 2 kcs) and relatively large current pulse flowing through the bias-voltage source during the instant of operation. A multivibrator circuit using current gates, which are type P16 transistors, is also described. V. P. [Translation of abstract]

SUB CODE: 09, 20

Card 1/1 *lolk*

Yakovlev, G.V.

37

PHASE I BOOK EXPLOITATION

SOV/6333

Bochkarev, V. V., ed.

Tekhnika izmereniye radioaktivnykh preparatov; sbornik statey (Techniques for the Measurement of Radioactive Preparations; Collection of Articles) Moscow, Gosatomizdat, 1962. 4600 copies printed.

Eds.: A. M. Smirnova and M. A. Smirnov; Tech. Ed.: S. M. Popova.

PURPOSE: This book is intended for specialists in nuclear instrumentation.

COVERAGE: The book is a collection of articles on recent developments in 1) measurement of the activity and 2) analysis of the composition of emissions of radioactive preparations. The methodology and apparatus used in these studies are described in detail. References are given at the end of each article.

TABLE OF CONTENTS:

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Techniques for the Measurement (Cont.)

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15

- Turkin, A. D. Measurement of the Concentration of β -Emitting Gases and the Determination of Their Isotopic Composition by Means of Spherical Ionization Chambers 134
- Lavrenchik, V. N. Measurement of the γ - and β -Activity of Aerosols 139
- Ivanov, Yu. P., K. N. Shlyagin, and P. N. Feoktistov. Magnetic β - and γ -Spectrometer 156
- Ivanov, Yu. P., I. A. Rumer, and K. N. Shlyagin. Magnetic Spectrometer BPP-3 168
- Bazhenov, B. A., Yu. M. Golubev, K. N. Shlyagin, P. N. Feoktistov, and G. V. Yakovlev. Scintillation γ -Spectrometer With a Multichannel Analyzer and a Unit for the Automatic Plotting of Spectra 182
- Bazhenov, V. A., Yu. M. Golubev, and K. N. Shlyagin. Scintillation Spectrometer Counter With Allowance for Dead-Time Effect 202

Card 4/5 2/2

L 47209-66 ENT(1)

ACC NR: AR6020717

SOURCE CODE: UR/0274/66/000/002/A091/A091

28

AUTHOR: Yakovlev, G. V.; Ivanov, V. I.

5

TITLE: High-reliability slow trigger with digital input and a multivibrator
using current switches

15

SOURCE: Ref. zh. Radiotekhnika i elekrosvyaz¹, Abs. 2A642

REF SOURCE: Tr. 6-y Nauchno-tekhn. konferentsii po yadern. radioelektron.
T. I. M., Atomizdat, 1964, 107-114

TOPIC TAGS: trigger, digital input, multivibrator

ABSTRACT: The use of transistors with different types of conductivity has made possible the design of a trigger which does not have a vacuum tube analog and in which both transistors are closed or open simultaneously. These circuits, which are easily connected in series: 1) are not sensitive to the spread of transistor and component parameters or to fluctuation in power supply voltage, 2) permit the use of low gain transistors, and 3) operate steadily within a temperature range of 20 to +70C. Their disadvantages are a low speed (maximal frequency 1 to 2 kc) and a relatively high pulse of the current passing through the bias voltage source

Card 1/2

UDC: 621.373.545

L 177/2001

ACC NR: AR6020717

at the moment of triggering. A multivibrator circuit using P16 type transistors as current switches is also described. Orig. art. has a bibliography of 2 titles.
[Translation of abstract] [DW]

SUB CODE: 09/

Card 2/2 fv

100-10641/0644

L 44373-66 EWT(m)
ACC NR: AP6030458

(N)

SOURCE CODE: UR/0213/66/006/004/U04**

AUTHOR: Belyayev, L. I.; Gedeonov, L. I.; Yakovleva, G. V.

ORG: none

TITLE: Estimation of strontium-90 and cesium-137 content in the Black Sea

SOURCE: Okeanologiya, v. 6, no. 4, 1966, 641-644

TOPIC TAGS: nuclear radiation, strontium 90, cesium 137, ocean radioactivity, ocean property, radioactive fallout

ABSTRACT: Based on studies of radioactive fallout over the Black Sea during the period 1959-1964, an attempt is made to estimate the Sr⁹⁰ and Cs¹³⁷ content of the Black Sea. In calculating the content it is assumed that the Sr⁹⁰ and Cs¹³⁷ content, radiation carried to the Black Sea by its tributaries, is proportional to the rainfall. In determining the fallout density over the exchange between the Black, Azov, and Marmara Seas is taken into account, and water presented which show the total fission-product fallout over the Black Sea for 1960 to 1964, the water balance of the Black Sea, Sr⁹⁰ influx into the Black Sea, Sr⁹⁰ efflux into the Seas of Marmara and Azov, and the Sr⁹⁰ balance in the Black Sea. Since there is no available data on Cs¹³⁷ concentration in the Black Sea, Sr⁹⁰ to Cs¹³⁷ is 2 to 1. By estimate was made assuming that the activity ratio of Sr⁹⁰ to Cs¹³⁷ is 2 to 1. By

UDC: 551.465.4(26.03)

Card 1/2

L 44373-66

ACC NR: AP6030458

the end of 1964, the estimated Sr⁹⁰ and Cs¹³⁷ contents of the Black Sea were 2.7×10^4 and 5.4×10^4 cu, respectively. Orig. art. has: 5 tables and 1 figure. [LB]

SUB CODE: 08, 18/ SUBM DATE: 28May65/ ORIG REF: 014/ ATD PRESS: 5077

Card 2/2 hs

S/169/62/000/001/025/083
D228/D302

AUTHORS: Yakovlev, G. Ye. and Dikgof, Yu. A.

TITLE: Comparison of the theoretical and laboratory curves of electric-field intensity over a single vertical sheet of high resistance and small thickness

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 34, abstract 1A280 (V Sb. Materialy Nauchn. konferentsii molodykh uchenykh g. Kazani, Geol. i. geofiz., Kazan', Kazansk. un-t, 1960, 122-131)

TEXT: The question of determining the size of the surface density of fictitious electric charges ($\sigma_{2,1}$) is considered in the case of a vertical sheet of finite depth occurring beneath overburden, whose specific resistance equals that of the host-rocks. The influence of the shape of the vertical sheet on the magnitude of $\sigma_{2,1}$ is appraised. The comparison of the theoretical and observed curves of the anomalous intensity values is adduced. It is pointed

Card 1/2

Comparison of the ...

S/169/62/000/001/025/083
D228/D302

out that the best coincidence is observed at the maximum and at the abatement from it; at the points of their minimum and their inflexion the observed curves considerably differ from the theoretical, in consequence of which errors in the quantitative interpretation may reach 20 - 30%. / Abstractor's note: Complete translation. 7 ✓

Card 2/2

YAKOVLEV, G.Ne.; DIKGOF, Yu.A.

Quantitative interpretation of electric profiling material performed over three-dimensional bodies. Izv. AN SSSR. Ser. geofiz. no. 10:1375-1380 O '62. (MIRA 16:2)

1. Kuzanskiy gosudarstvenny universitet.
(Electromagnetic prospecting)

YAKOVLEV, I.

History of veterinary medicine. Veterinariia 40 no.3:82-87
Mr '63. (MIRA 17:1)

1. YAKOVLEV, I.
2. USSR (600)
4. Race Horses
7. Problem of neuroses in horses, connected with racetrack trials. Konevodstvo 23, No. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

USSR/Form Animals. Horses.

Q

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92537.

Author : Yakovlev, I

Inst :

Title : Types of Nerve System in Horses of the Orel Trotter Breed.

Orig Pub: Konvodstvo, 1957, No 1, 19-22.

Abstract: Types of nervous behavior are given for the Orel trotter breed (impetuous, strong-willed, well-balanced, agile and weak types) together with their basic functional characteristics.

Card : 1/1

30

YAKOVLEV, I., general-mayor tankovykh voysk; ZHIDKOV, K., inzhener-

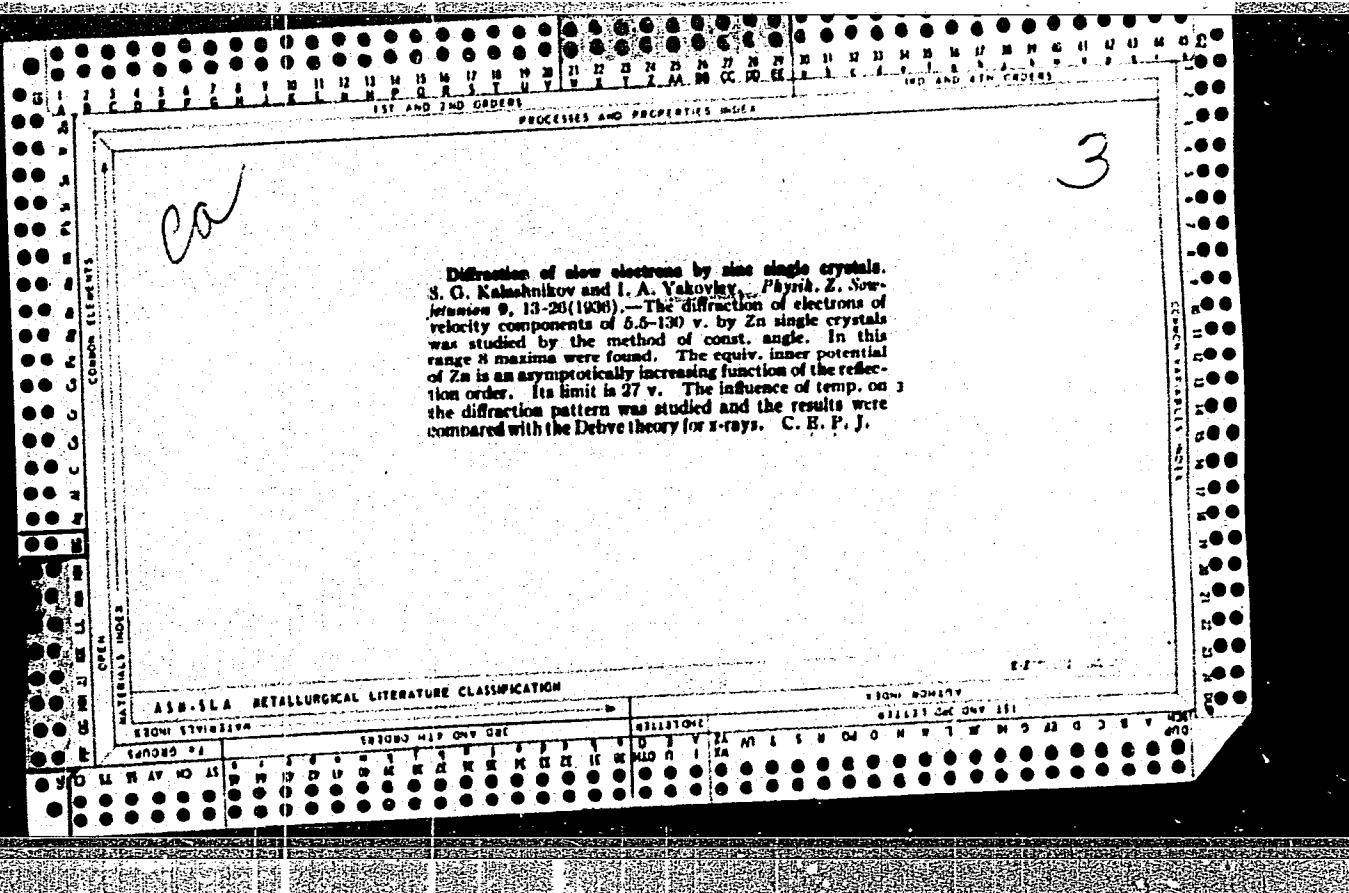
Train specialists of a high class. Voen.vest. 41 no.12:56-59
D '61. (MIRA 15:3)
(Tanks (Military science))

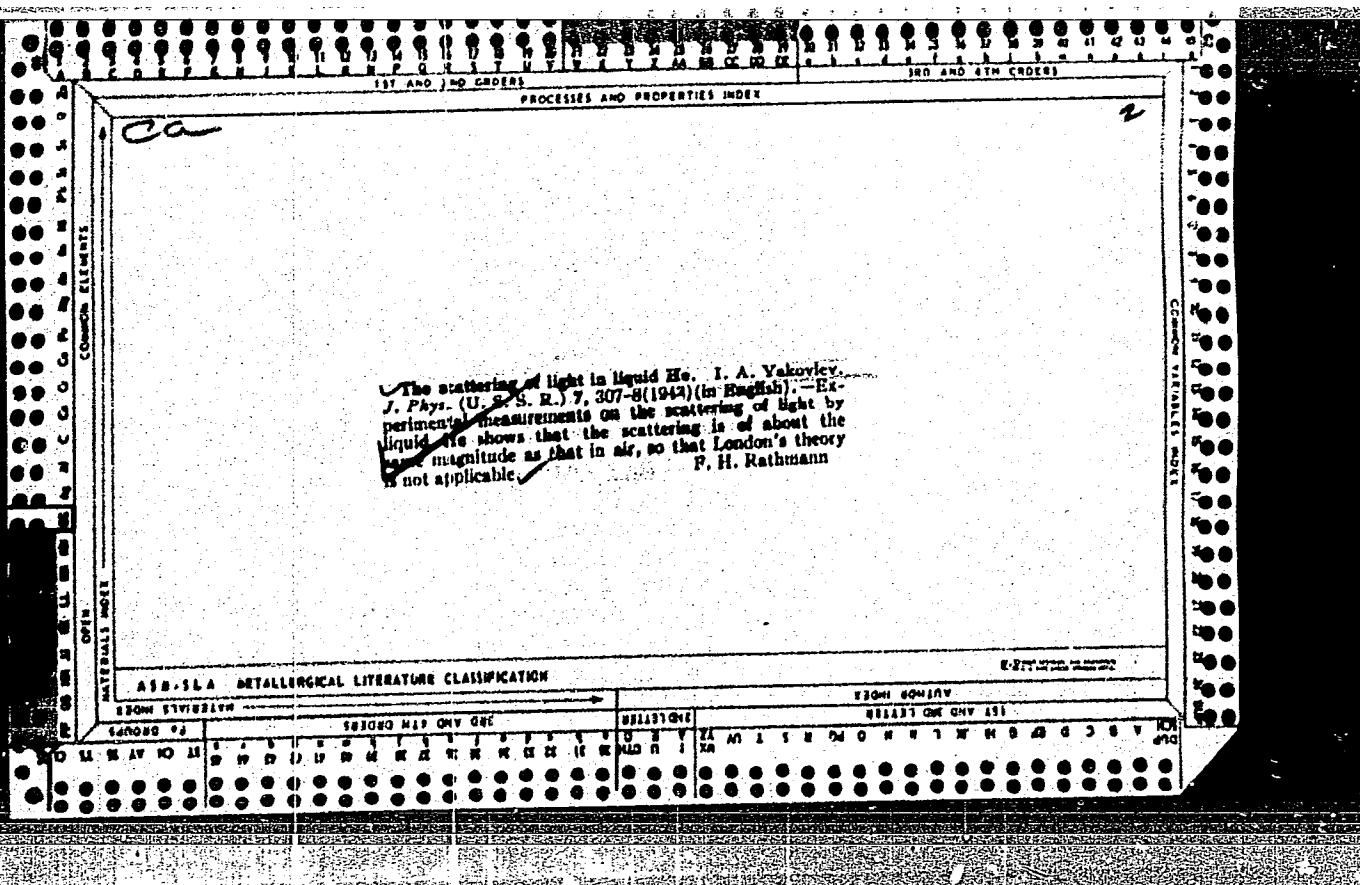
1. YAKOVLEV, I. A.; SHVANKOV, M. M., Engs.
2. USSR 600
4. Moscow - Transportation, Automotive
7. Electric trucks and electromobiles for municipal transportation in the capital,
Gor. khoz. Mosk, 21, No. 11, 1947.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

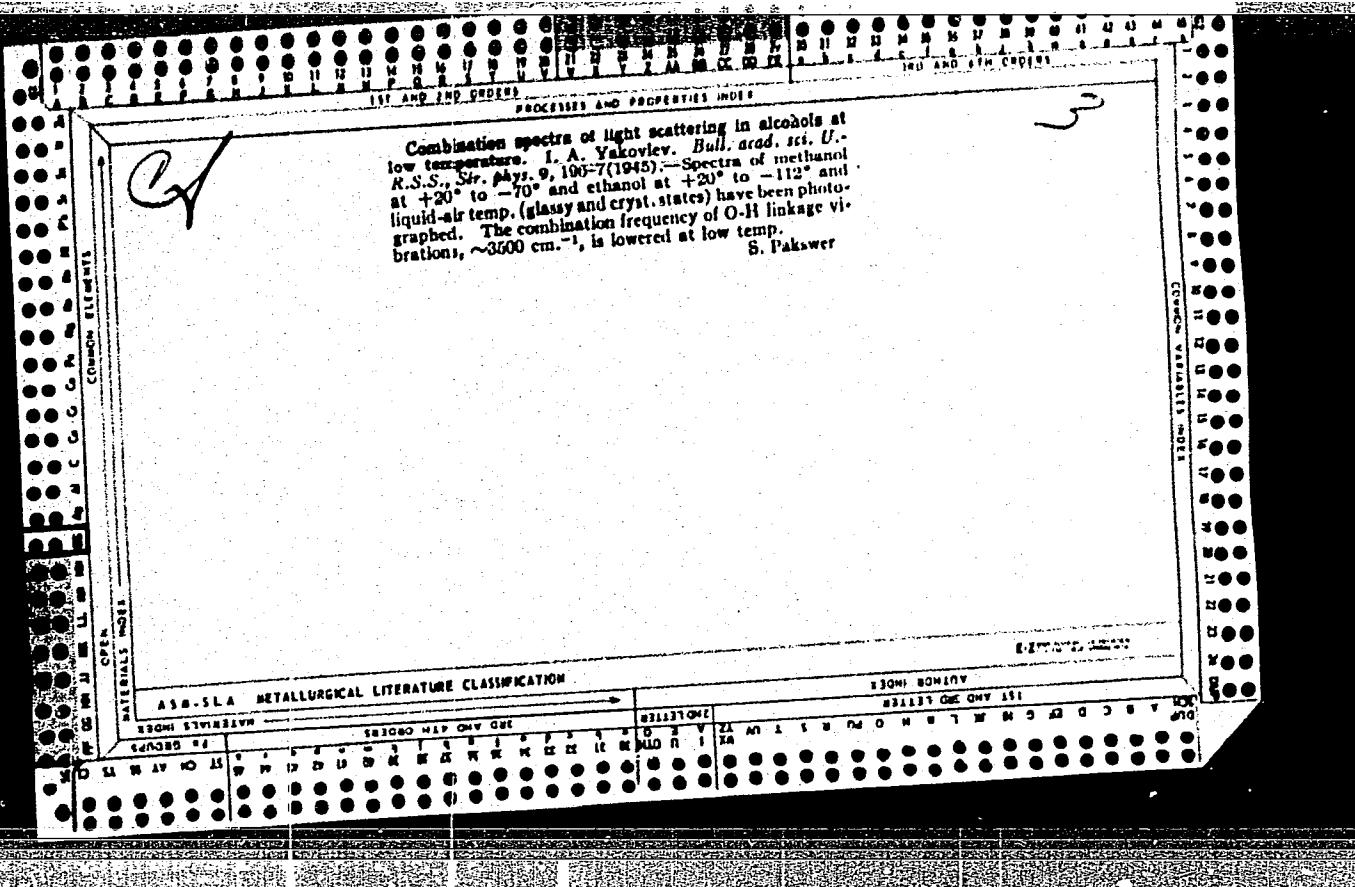
YAKOVLEV, I.A.

Removal of dust from the air exhausted by cyclons. Der. prom. 7
(MIRA 11:5)
no. 4:26 Ap '58.

1. Leningradskaya fabrika muzykal'nykh instrumentov im. Lunacharskogo.
(Dust--Removal)







VAKOVLEV, I. A.

Vakovlev, I. A. Hadamard's problem and the connection
between the geometry of hyperspace and spaces of con-

tinuous functions. (Russian) Izv. Akad. Nauk SSSR Ser. Mat.
1956, No. 1, pp. 3-24. MR 0080330
[which Huyghens' principle is valid (i.e., all equations which
characterize the propagation of disturbances without diffu-
sion) are of type (A). Huyghens' principle does not
hold in odd dimensions, but the wave equation in odd
dimensions can be converted to the wave equation by a trans-
formation of type (A), consisting of, i.e., multiplying the

Source: Mathematical Reviews,

Vol 10 No.6

Leningrad Res. Institute

Reducing
dimensions
of a
vector
space

By definition $f(x)$
is a linear
operator
from V_1 to V_2 .
This
means
that
if
 x_1, x_2
are
in
 V_1 ,
then
 $f(x_1 + x_2) = f(x_1) + f(x_2)$

and if
 c is a
scalar
then
 $f(cx) = c f(x)$

Let x be
a
vector
in
 V_1 .
Then
 $f(x)$
is
a
vector
in
 V_2 .

Let x_1, x_2
be
vectors
in
 V_1 .
Then
 $f(x_1 + x_2)$
is
a
vector
in
 V_2 .

Let c be
a
scalar.
Then
 $f(cx)$
is
a
vector
in
 V_2 .

Source: Mathematical Review.

Yakovle, J. A. Card

10 Nov 6

1. IVERONOVA, V. I.; YAKOVLEV, I. A.
2. USSR (600)
4. Physics and Mathematics
7. Course in Physics, (Vol 1, Moscow-Leningrad, State Technical Press, 1947-1948) Reviewed by V. I. Iveronova and I. A. Yakovlev, Sov. Kniga, No. 11, 1949.
9. ■ Report U-3081, 16 Jan. 1953. Unclassified.

1. YAKOVLEV, I. A.
2. USSR (600)
4. Physics and Mathematics
7. Guide to Practical Occupations in Physics, T. N. Bogdanova and Ye. P. Subbotina. Professor K. K. Baumgart, editor. (Part I, 1949; Part II, 1950. Moscow, "Soviet Science."). Reviewed by I. A. Yakovlev, Sov. Kniga, No. 9, 1951.
9. [REDACTED] Report U-3081, 16 Jan. 1953, Unclassified.

YAKOVLEV, IA.

USSR/Physics - Regulation, Discontinuous (Discrete) May/Jun 51

"Discussion: Remarks on the Work of Ya. Z. Tsypkin,
Theory of Discontinuous (Discrete) Regulation.
I," I. A. Yakovlev

"Avtomat i Telemekh" Vol XII, No 3, pp 232-234

Touches on the connection between "discrete La-
place transformations," introduced by Ya. Z.
Tsypkin in "Avtomat i Telemekh" Vol X, No 3, 189,
1949, and ordinary Laplace transformations. Cf.
D. V. Widder's "The Laplace Transformation," 1941
Submitted 1 Dec 50. (In a note to the editors
Tsypkin acknowledges making an incorrect assertion)

215T63

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961910016-7

IVERONOVA, V.I., professor, redaktor; BELYANKIN, A.G.; CHETVERIKOVA, Ye.S.;
YAKOVLEV, I.A.

[Practical work in physics; manual] Fizicheskii praktikum; ruko-
vodstvo k prakticheskim zaniatiiam po fizike. Izd.2., ispr. Moskva,
Gos. izd-vo tekhniko-teoret. lit-ry, 1953. 634 p. (MIRA 7:3)
(Physics--Laboratory manuals)

APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001961910016-7"

YAKOVLEV, I.A. (Khar'kov)

Limits of applying IA.Z.Tsyplkin's method to the theory of pulse control.
Avtom. i telem. 14 no.4:460-465 Jl-Ag '53. (MLRA 10:3)
(Automatic control) (Pulse techniques (Electronics))

IVERCHNOVA, V. I., KALASHNIKOV, S. G., YAKOVLEV, I. A.

Timoreva, A.V.

"Course in general physics." Vols. 1-3. E.S. Frish. A.V. Timoreva. Reviewed by V.I.
Iveronova, S.G. Kalashnikov, I.A. Yakovlev; Sov. kniga No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

USSR/ Physical Chemistry - Crystals

B-5

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 10997

Author : Yakovlev I.A., Mikheyeva L.F., Velichkina T.S.

Title : Molecular Scattering of Light and $\alpha \leftrightarrow \beta$ Transformation of Quartz

Orgl Pub : Kristallografiya, 1956, 1, No 1, 123-131

Abstract : Intensity of molecular scattering of light was measured (for the group of Hg-lines 4360, 4078 and 4047 Å, and the line 5460 Å) in quartz, in the temperature interval 15 to 600°. Up to 400° intensity of scattered light increases linearly with temperature; it rises sharply in the interval 400-573° and then drops sharply. From the occurrence of a scattering maximum in the vicinity of the point of $\alpha \leftrightarrow \beta$ phase transition (573°) the conclusion is reached concerning increased fluctuations of dielectric constant of quartz near this point. Detected and quantitatively studied was the phenomenon of reversible molecular opalescence near the point of polymorphous transformation. Possible molecular mechanism of formation in the crystal of sharp optical heterogeneities at transformation temperature is discussed.

Card 1/1

Moscow State U.

YAKOVLEV, I. A.

B-5

Category: USSR / Physical Chemistry - Crystals

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29651

Author : Shal'nikova N. A., Yakovlev I. A.

Inst : not given

Title : Roentgenographic Determination of Crystal Lattice Constants and
Coefficients of Thermal Expansion of Leucosapphire and Ruby.

Orig Pub: Kristallografiya, 1956, 1, No 5, 531-533

Abstract: Roentgenographic determination of the lattice parameters of leuco-
sapphire in the temperature range of 20-1000° and of the dependence
of the lattice parameters of ruby on the percentage content of Cr_2O_3 .

Card : 1/1

-8-

YAKOVLEV, I.A.; VELICHKINA, T.S.; BARANSKIY, K.N.

Effect of an electrostatic field on the sound absorption of Rochelle salt. Zhur. eksp. i teor. fiz. 33 no.4:1075-1076 0 '56. (MIRA 13:1)

1. Moskovskiy gosudarstvennyy universitet.
(Sound waves) (Ferroelectric substances)

YAKOVLEV, I. A.
Category : USSR/Optics - Physical optics

K-5

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 2343

Author : Yakovlev, I.A., Vilichkina, T.S., Mikheyeva, L.F.

Inst : Moscow State University, USSR

Title : Opalescence Phenomenon upon Phase Transformation in Quartz

Orig Pub : Dokl. AN SSSR, 1956, 107, No 5, 675-677

Abstract : The temperature dependence of the intensity of molecular scattering of light in quartz was studied in the 15--600° interval. A beam of light from an Hg lamp propagated along one of the axes of a crystal located in an oven. The vertical temperature gradient did not exceed 0.01 degree/mm, and the horizontal gradient along the light beam was 0.03 deg/mm. The cycle 15° → 600° → 15° lasted 72 hours. Near the $\alpha \rightleftharpoons \beta$ phase-transition point (573°) the temperature changed at a rate of approximately 0.3 degree per hour. On the curve $I_t/I_{20} = f(t)$, where I is the intensity of the scattered polarized light, there is a linear section in the 15--500° interval, with a sharp λ -shaped maximum at the phase transition temperature. In addition, when one of the end faces of the crystal reaches the phase-transformation temperature, there occurs at that end face a band of optical inhomogeneity, which scatters light strongly (approximately 1.4×10^4 more than at 20°), and which is similar to the fog band, and which

Card : 1/2

Category : USSR/Optics - Physical optics

K-5

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 2343

shifts toward the other end with rising temperature. This band, 1--3 mm thick, cuts all the transverse sections of the crystal and is surrounded on both sides with transparent portions of the crystal, corresponding to the α and β phases. An investigation of the dependence of I on λ shown that the dimensions of the optical irregularities are less than λ (the $1/\lambda^4$ law holds). All the phenomena are reversible and can be reproduced many times.

Card : 2/2

YAKOVLEV, I. A., Doc. Sci. (miss) "Second-order phased transformation in solid bodies", Moscow, 1957. 26 pp, (Moscow State Inst named after M.V. Lomonosov. Physical faculty), 100 copies

(KL, № 39, p93)

PRIKHOT'KO, A.F.

24(7) p.3 PHASE I BOOK EXPLOITATION Sov/1365
L'vov. UniversitetMaterialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1:
Molekul'arnaya spektroskopiya (Papers of the 10th All-Union
Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy)
[L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies
printed. (Series: Ita: Fizichnyy zbirnyk, vyp. 3/6/1)Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po
spektroskopii. Ed.: Jazev, S.L.; Tsch. Ed.: Saranyuk, T.V.;
Editorial Board: Laristeng, O.S., Academician (Resp. Ed., Deceased),
Neporont, B.S., Doctor of Physical and Mathematical Sciences,
Fabolin'skiy, I.L., Doctor of Physical and Mathematical Sciences,
Fabrikant, V.A., Doctor of Physical and Mathematical Sciences,
Kornitckiy, V.G., Candidate of Technical Sciences, Rayakiv, S.M.,
Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K.,
Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.J.,
Candidate of Physical and Mathematical Sciences, and Glauberman,
A. Ye., Candidate of Physical and Mathematical Sciences.
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Card 8/30

AUTHOR

"YAKOVLEV, I.A., VELICHINKA, T.S., BARANSHIY, K.N. 56-4-42/52

TITLE

The Absorption of Sound on the Occasion of a Phase Transformation
(Pogloshcheniye zvuka pri fazovom prevrashchenii v segnetovoy soli.
Russian)

PERIODICAL

Zhurnal Eksperim i Teorat. Fiziki, 1957, Vol 32, Nr 4, pp 935 - 936
(U.S.S.R.)

ABSTRACT

Landau and Khalatnikov predicted an amplification of sound absorption in the phase corresponding to the low temperature in the proximity of the λ -point. For the purpose of confirming this phenomenon the authors carried out experiments on the absorption of sound in a seignette salt in the vicinity of its upper CURIE point. The authors applied the impulse method for the measuring of the damping of the sound in the monocrystal of the seignette salt. The impulses of the transversal oscillations were transferred to a foil of the seignette salt which was fitted in a thermostat.

A diagram shows the here found dependence of the amplitude coefficient α of the sound absorption upon temperature. The results obtained here show the following. - The anomalous absorption of sound in the case of a phase transformation of the second order, which was predicted by LANDAU and KHALATNIKOV actually takes place in a solid body. This phenomenon has its characteristic peculiarities in a seignette-electricum. - a transversal sound wave with a certain polarization suffers an anomalous

Card 1/2.

56-442/52

The Absorption of Sound on the Occasion of a Phase Transformation
absorption and the absorption of the sound increases in both phases on
the occasion of the approximation of the temperatures of the phases at
the λ -points. The case investigated here was explained already in a
theoretical work by LANDAU, the corresponding results will be explained
in a detailed paper. On the basis of the results discussed in the pre-
sent paper also an observation made by H.B. HUNTINGTON, Phys. Rev., Vol.
72, p 321 (1947) is explainable. (With 1 illustration).

ASSOCIATION
PRESENTED BY
SUBMITTED
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Moscow State University

7.1.1957

Library of Congress

Card 2/2

YAKOVLEV, I.A.

56-4-53/54

AUTHORS:

Yakovlev, I.A., Velichkina, T.S., Baranskiy, K.N.

TITLE:

The Influence Exerted by an Electrostatic Field on the Sound Absorption in Seignette Salts (Vliyanie elektrostaticheskogo polya na pogloshcheniye zvuka v segnetovoy soli)
(Letter to the Editor)

PERIODICAL:

Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol. 33, Nr 4,
pp. 1075 - 1076 (USSR)

ABSTRACT:

The evaluation of the piezoelectric properties of a Rochelle-salt crystal shows that a deformation that stems from the propagation of an acoustic wave brings about a polarization of the crystal along its Seignette-electric axis x. It is therefore important to investigate the absorption of these waves also then, when the crystal is already from the beginning pre-polarized by an external electrostatic field in the direction of the x-axis. This case was experimentally examined. It was shown that at temperatures above the Curie point the sound absorption does not depend on the external field. At temperatures several degrees lower than the Curie point the sound absorption is only slightly dependent on the external field. At temperatures lying only 0,1 to 0,2° C below the Curie point the influence of the electro-

Card 1/2

56-4-53/54

The Influence Exerted by an Electrostatic Field on the Sound Absorption in
Seignette Salts

static field on the sound absorption is very great. There are
2 figures and 1 Slavic reference.

ASSOCIATION: Moscow State University
(Moskovskiy gosudarstvennyy universitet)

SUBMITTED: July 27, 1957

AVAILABLE: Library of Congress

Card 2/2

YAKOVLEV, I.A.

53-2-7/9

AUTHORS: Yakovlev, I.A., Velichkina, T.S.

TITLE: Two New Phenomena in Phase Transformations of Second Type (Dva novykh yavleniya pri fazovykh prevrashcheniyakh vtorogo roda)

PERIODICAL: Uspekhi Fiz. Nauk, 1957, Vol. 62, Nr 2, pp. 411 - 433 (USSR)

ABSTRACT: The present paper gives special consideration to the phenomena in solids. Because of the fact, that in all cases discussed, experimental results are known, the authors at the beginning of every chapter describe the actually observed course taken by the phenomena, without giving consideration to the chronological order of the notes of the authors.

The phenomenon of opalescence on the phase transformation of quartz: The molecular dispersion of light in quartz is very weak at 20°C. The intensity of the dispersed light shows a practically linear dependence on temperature from room temperature to +250°C. The dispersed light is partially depolarized according to the anisotropy of the crystals. A characteristic peculiarity of the phase transformation of quartz, which is essential for the phenomena discussed here, is the abrupt modi-

Card 1/2

53-2-7/9

Two New Phenomena in Phase Transformations of Second Type

fication of the diffraction index n of this crystal in the vicinity of its λ -point. Moreover, the temperature dependence of the isothermal elastic constants of this crystal at the approach of the λ -point must be mentioned.

The theory of the dispersion of light on phase transformations of second type: The first general investigation of this problem, which remains the only one up to now, comes from V.L. Ginzburg, Doklady AN SSSR, 1955, Vol. 105, pp. 240 - 243.

The absorption of sound and the phase transformation of the second type: In the vicinity of the point of phase transformation ($\theta = 2,19^\circ\text{K}$, $p = 1 \text{ atm}$) the sound velocity passes through a shallow minimum and the absorption coefficient passes through a sharp maximum. Within a temperature interval of $\sim 0,03^\circ\text{K}$ the absorption coefficient increases more than hundredfold. The absorption coefficient in He of the first sound is proportional to the square of the frequency in the vicinity of the λ -point. The last chapter deals comparatively detailed with the absorption of sound on the phase transformation of the second type in a seignette electricum. There are 14 figures, and 25 references, 20 of which are Slavic.

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БАРАНСКИЙ, К. Н.
VELICHKINA, T. S., BARANSKIY, K. N. and YAKOVLEV, I. A.

"Relaxation Absorption of Sound in Second Order Phase Transitions."

paper presented at 4th All-Union Acoustical Conf., Moscow, 26 May 4 June 58.

Mineographed collection of brief abstracts, Referaty dokladov, (Abstracts of Reports at the 4th All-Union Acoustical Conference) Pt. 2, Moscow, Akad. nauk SSSR, 1958. 44pp.

(Phase I Book Exploitation SOV/1627)

YANOVLEV, L. H.

21(0),24(0) P.2 PHASE I BOOK EXPLOITATION SOV/3250

Akademiya nauk SSSR. Fizicheskiy institut

Issledovaniya po eksperimental'noy i teoreticheskoy fizike; [sbornik] (Studies on Experimental and Theoretical Physics; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 304 p. Errata slip inserted. 2,300 copies printed.

Ed.: I. L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; Eds. of Publishing House: A. L. Chernyak and V. G. Berkgauf; Tech. Ed.: Yu. V. Rylina; Commission for Publishing the Collection in Memory of Grigoriya Samuilovich Landsberg: I. Ye. Tamm (Chairman), Academician; M. A. Leontovich, Academician; P. A. Bazhulin, Doctor of Physical and Mathematical Sciences; S. L. Mandel'shtam, Doctor of Physical and Mathematical Sciences; I. L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; F. S. Landsberg-Baryshanskaya, Candidate of Physical and Mathematical Sciences; and G. P. Motulevich (Secretary), Candidate of Physical and Mathematical Sciences.

PURPOSE: This book is intended for physicists and researchers engaged in the study of electromagnetic radiations and their role in investigating the structure and composition of materials.

Card 1/6

Studies on Experimental (Cont.)

SOV/3250

COVERAGE: The collection contains 30 articles which review investigations in spectroscopy, sonics, molecular optics, semiconductor physics, nuclear physics, and other branches of physics. The introductory chapter gives a biographical profile of G. S. Landsberg, Professor and Head of the Department of Optics of the Division of Physical Technology at Moscow University, and reviews his work in Rayleigh scattering, combat gases, spectral analysis of metals, etc. No personalities are mentioned. References accompany each article.

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Bazhulin, P. A., V. I. Malyshev, and M. M. Sushchinskii. The Work of G. S. Landsberg in the Field of Molecular Spectroscopy 17 Card 2/6	

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S/056/61/040/003/030/031
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AUTHORS: Shustin, O. A., Velichkina, T. S., Baranskiy, K. N.,
Yakovlev, I. A.

TITLE: Absorption of sound by Rochelle salt in the neighborhood of its lower Curie point

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40,
no. 3, 1961, 979-980

TEXT: At a temperature in the neighborhood of its upper Curie point ($\theta = 24^\circ\text{C}$) Rochelle salt exhibits an anomalously large absorption of transverse elastic waves propagating along the z-crystallographic axis and polarized along the y-axis. This result is given in an earlier paper (Ref. 1: I. A. Yakovlev, T. S. Velichkina, K. N. Baranskiy, ZhETF, 32, 935, 1957). In the present paper, the absorption of waves polarized in the manner mentioned above and having a frequency $\nu = \omega/2\pi = 5 \text{ Mc/sec}$ is investigated for the case of Rochelle salt in the neighborhood of its lower Curie point ($\theta = -18^\circ\text{C}$). The figure shows the experimental absorption curve 1 - 1 (crystal temperature T as abscissa, absorption

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Absorption of sound by...

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coefficient κ as ordinate). Its theory is by L. D. Landau who has derived the following formula:

$$\kappa^2 = \frac{\omega^2}{2} \left(\mu \left[1 + \frac{8\pi\lambda^2(\mu/\epsilon + 2\pi\lambda^2)}{\mu^2(\epsilon^{-2} + 16\pi^2\omega^2\gamma^{-2})} \right]^{1/2} - \mu - \frac{4\pi\lambda^2/\epsilon}{\epsilon^{-2} + 16\pi^2\omega^2\gamma^{-2}} \right). \quad (1)$$

Here, the dielectric constant of the Rochelle salt is given by $\epsilon = 4\pi C/(\theta-T)$ for $T < \theta$ and $\epsilon = 2\pi C/(T-\theta)$ for $T > \theta$, ρ is the density of the salt, μ the modulus of shear at constant induction D_x , λ the piezoelectric constant of the crystal, and γ the coefficient in the kinetic equation $\partial D_x / \partial t = \gamma \partial \phi / \partial D_x$ (ϕ the thermodynamic potential of the crystal).

Numerical values are substituted into formula (1), and the following

approximate formula is obtained: $\kappa = 8/\mu \frac{\pi^2 \lambda^2 \omega^2 / \gamma}{\epsilon^{-2} + 16\pi^2 \omega^2 \gamma^{-2}}$. It is represented in the figure by the curve 2-2. The good agreement for $T < \theta$ between Landau's theory and the experiment allowed a determination of the relaxation time τ for $T < \theta$: $\tau = 4\pi\epsilon/\gamma \approx 3.4 \cdot 10^{-8}/(\theta-T)$ sec. There are

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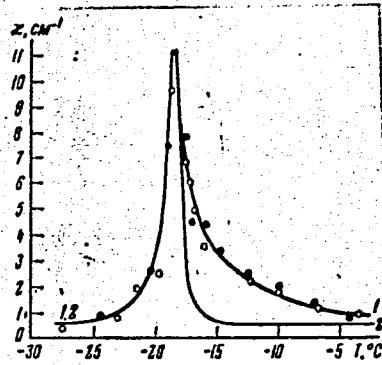
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B112/B214

Absorption of sound by...

1 figure and 3 Soviet-bloc references.

ASSOCIATION: Fizicheskiy institut Chekoslovatskoy Akademii nauk, Praga
(Institute of Physics of the Czechoslovakian Academy of Sciences, Prague)

SUBMITTED: January 7, 1961



Card 3/3

SOBOLEV, Sergey L'vovich, akademik; SMOLITSKIY, Kh.L.; YAKOVLEV, I.A.

[Some applications of functional analysis in mathematical physics] Nekotorye primeneniya funktsional'nogo analiza v matematicheskoi fizike. Novosibirsk, Izd-vo Sibirskogo otdeleniya AN SSSR, 1962. 251 p. (MIRA 15:10)
(Functional analysis) (Mathematical physics)

KOZHATKIN, V.A.; YAKOVLEV, I.A.

Lecture demonstration of adiabatic processes. Izv. vys.
ucheb. zav.; fiz. no.5:179 '62. (MIRA 15:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Heat of compression)
(Physics—Study and teaching)

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S/056/62/043/002/052/053
B108/B102

AUTHORS: Baranskiy, K. N., Shustin, O. A., Velichkina, T. S.,
Yakovlev, I. A.

TITLE: Frequency dependence of sound absorption in Rochelle salt
near its upper Curie point

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 2(8), 1962, 730

TEXT: Continuing earlier work (ZhETF, 40, 979, 1961; 32, 935, 1957) the
authors studied the frequency and temperature dependences of the
absorption coefficient for transverse waves in Rochelle salt. Measurements
on 5 and 15 Mcps gave the same maximum absorption coefficient κ (Fig.).
The results agree with Landau's approximate formula $\kappa = A\omega^2/(\epsilon_x^{-2} + B\omega^2)$. \times
Here, A and B are functions of only the constants of the material. ϵ_x is
the dielectric constant in the x-direction. There is 1 figure.

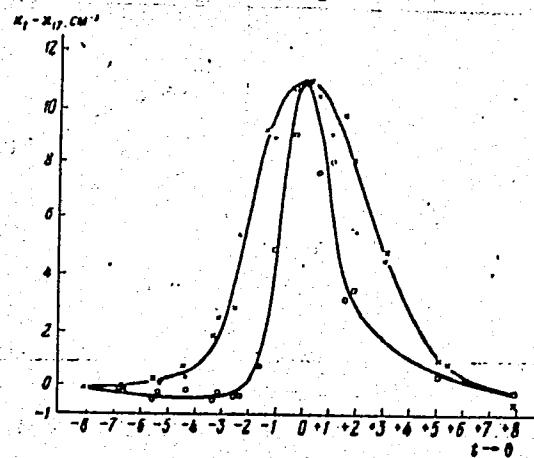
ASSOCIATION: Moskovskiy gosudarstvenny universitet (Moscow State University)
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Frequency dependence of sound ...

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SUBMITTED: June 2, 1962

Fig. Temperature dependence of the sound absorption coefficient κ .
Legend: $\circ - \omega = 5$ Mcps, $x - \omega = 15$ Mcps.



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BELYANKIN, A.G.; MOTULEVICH, G.P.; CHETVERIKOVA, Ye.S.; YAKOVLEV,
I.A.; IVERONOVA, V.I., prof., red.; KUZNETSOVA, Ye.B., red.;
KRYUCHKOVA, V.N., tekhn. red.

[Laboratory manual on physics] Fizicheskii praktikum. Pod
red. V.I.Iveronovi. Moskva, Fizmatgiz, 1962. 956 p.
(MIRA 16:5)

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IVERONOVA, V.I., prof., red.; GRABOVSKIY, M.A., dots., red.;
KONONKOV, A.F., kand. fiz.-mate. nauk, red.; MALOV, N.N.,
prof., red.; TELESTIN, R.V., prof., red.; USAGIN, S.I.,
st. prepod., red.; YAKOVLEV, K.P., prof., red.; YAKOVLEV,
I.A., prof., red.

[Methodology and technique of lecture demonstrations in
physics; transactions] Metodika i tekhnika lektsionnykh
demonstratsii po fizike; sbornik trudov. Moskva, Izd-vo
Mosk. univ., 1964. 280 p. (MIRA 17:5)

1. Mezhvuzovskaya konferentsiya po lektsionnym demonstra-
tsiyam po kursu obshchey fiziki. 1st.

STRELKOV, Sergey Pavlovich; EL'TSIN, Iosif Abramovich; YAKOVLEV,
Ivan Alekseyevich; KHAYKIN, S.E., prof., red.;
LIVSHITS, B.L., red.

[Problems in a general physics course] Sbornik zadach po
obshchemu kursu fiziki. Moskva, Nauka. Pt.1. [Mechanics,
electricity and magnetism] Mekhanika, elektrichestvo i
magnetizm. Izd.3. Pod red. S.E.Khaikina. 1964. 312 p.
(MIRA 17:9)

YAKOVLEV, I.A.; UVAD'YEV, L.I.; GRINCHENKO, B.M.

Some new data on the structure of the Pechenga synclinorium.
Geol. rud. mestorozh. 5 no.6:96-100 N-D'63. (MIRA 17:5)

1. Pechengskaya geologicheskaya ekspeditsiya Severo-Zapadnogo
geologicheskogo upravleniya.

YAKOVLEV, I.A.

Determining the boundaries of the principal intervals in
magnetotelluric profiling. Razved. i prom. geofiz. no.5:
87-94 '64. (MITKA 17:1).

L 2090-66 EWA(k)/FBD/EWT(l)/EWP(e)/EWT(m)/EPF(c)/EEG(k)-2/ENP(i)/T/EWP(k)/EWP(b)/
EWA(m)-2/EWA(h) SCTB/IJP(e) WG/WH/CG/WH
ACCESSION NR: AP5025260

UR/0386/65/002/004/0189/0192

AUTHOR: Velichkina, T. S.; Shustin, O. A.; Yakovlev, I. A.

TITLE: Fine structure of the spectral lines of light scattered by crystals of cubic symmetry

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 4, 1965, 189-192, and insert attached to p. 191

TOPIC TAGS: laser, gas laser, laser application, sound velocity, Rayleigh component, phonon, crystal

ABSTRACT: The velocity of hypersonic acoustic waves in a series of crystals of the cubic system NaCl, KCl, NH₄Cl + 1% Co and in a low-temperature modification of quartz crystals was determined from ordinary (spontaneous) Brillouin components generated by the coherent light scattered in the crystal. The light from an He-Ne laser ($\lambda = 6328 \text{ \AA}$), concentrated into a 0.5 mm^2 beam, passed through the crystal onto a concave reflector and then back through the crystal and into the laser. Fine adjustment of another reflector in front of the laser made it

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